

**Fig. 1A**

SUS1	SEQ ID NO: 2	ENGIL <u>RR</u> KWISRFDVW		native
SUS2	SEQ ID NO: 3	ENGIV <u>RR</u> KWISRFEVW		native
SS2	SEQ ID NO: 10	GIV <u>RR</u> KWISRFEVWPYL	<b>KK</b>	active
SS11	SEQ ID NO: 11	ILRVPFRTENGIV <u>RR</u> K	(NH <sub>2</sub> )	inactive
SS12	SEQ ID NO: 12	GIV <u>RR</u> KWISRFEVWPYL	(NH <sub>2</sub> )	active
SS15	SEQ ID NO: 13	GIV <u>RR</u> <b>A</b> ISRFEV <b>A</b> PYL	(NH <sub>2</sub> )	less active
SS16	SEQ ID NO: 14		SRFEVWPYL (NH <sub>2</sub> )	less active
SP3	SEQ ID NO: 18	<b>RR</b> ISSVE	<b>DKK</b> (NH <sub>2</sub> )	inactive
NR11	SEQ ID NO: 15	GPTL <u>RR</u> TASTAFMNTTS	<b>KK</b>	inactive
SP26	SEQ ID NO: 16	GRM <u>RR</u> IATVEMM	<b>KK</b>	inactive
SS1	SEQ ID NO: 9	GDRVLSRLHSVRERIGK		inactive
ACTIN	SEQ ID NO: 19	EHGIVTNWDDMEKIWHHTFY		consensus

Double basic cluster: black box; e.g. **RR**

Possible region of specificity: underlined or boxed

Substitutions: bold

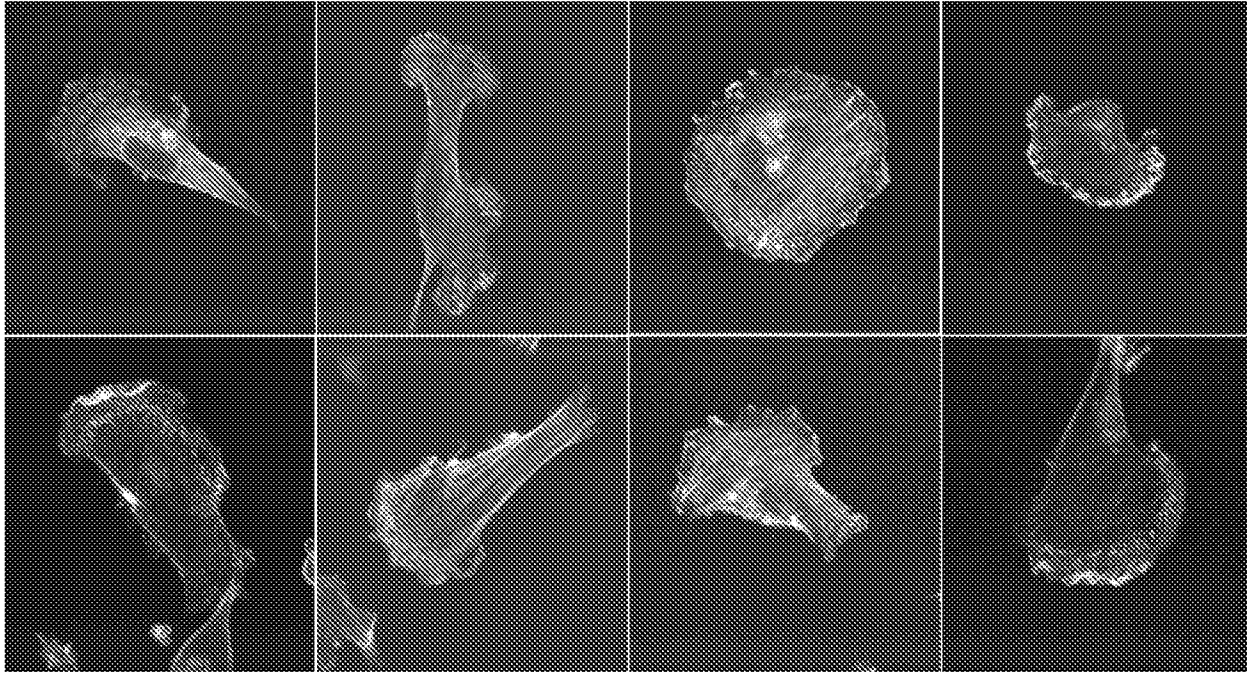
Fig. 1B



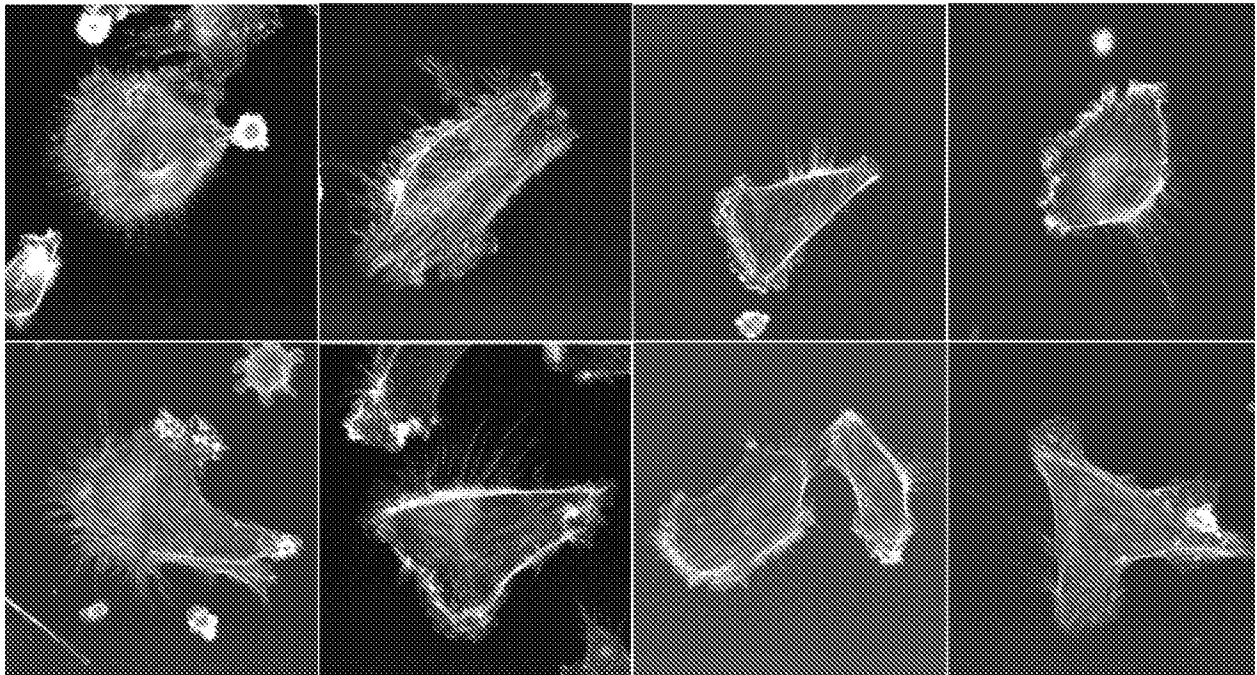
SEQ ID NO.		SEQUENCE
SEQ ID NO:22	X <sub>1</sub>	SRFEVW
SEQ ID NO:17	X <sub>2</sub> -X <sub>1</sub>	WISRFEVW
SEQ ID NO:14	X <sub>1</sub> -X <sub>5</sub>	SRFEVWPYL
SEQ ID NO:23	X <sub>2</sub> -X <sub>1</sub> -X <sub>5</sub> -X <sub>6</sub>	WISRFEVWPYLKK
SEQ ID NO:12	X <sub>3</sub> -X <sub>2</sub> -X <sub>1</sub> -X <sub>5</sub>	GIVRKWISRFEVWPYL
SEQ ID NO:10	X <sub>3</sub> -X <sub>2</sub> -X <sub>1</sub> -X <sub>5</sub> -X <sub>6</sub>	GIVRKWISRFEVWPYLKK
SEQ ID NO:24	X <sub>4</sub> -X <sub>3</sub> -X <sub>2</sub> -X <sub>1</sub> -X <sub>5</sub> -X <sub>6</sub>	ENGIVRKWISRFEVWPYLKK

**Fig. 2**

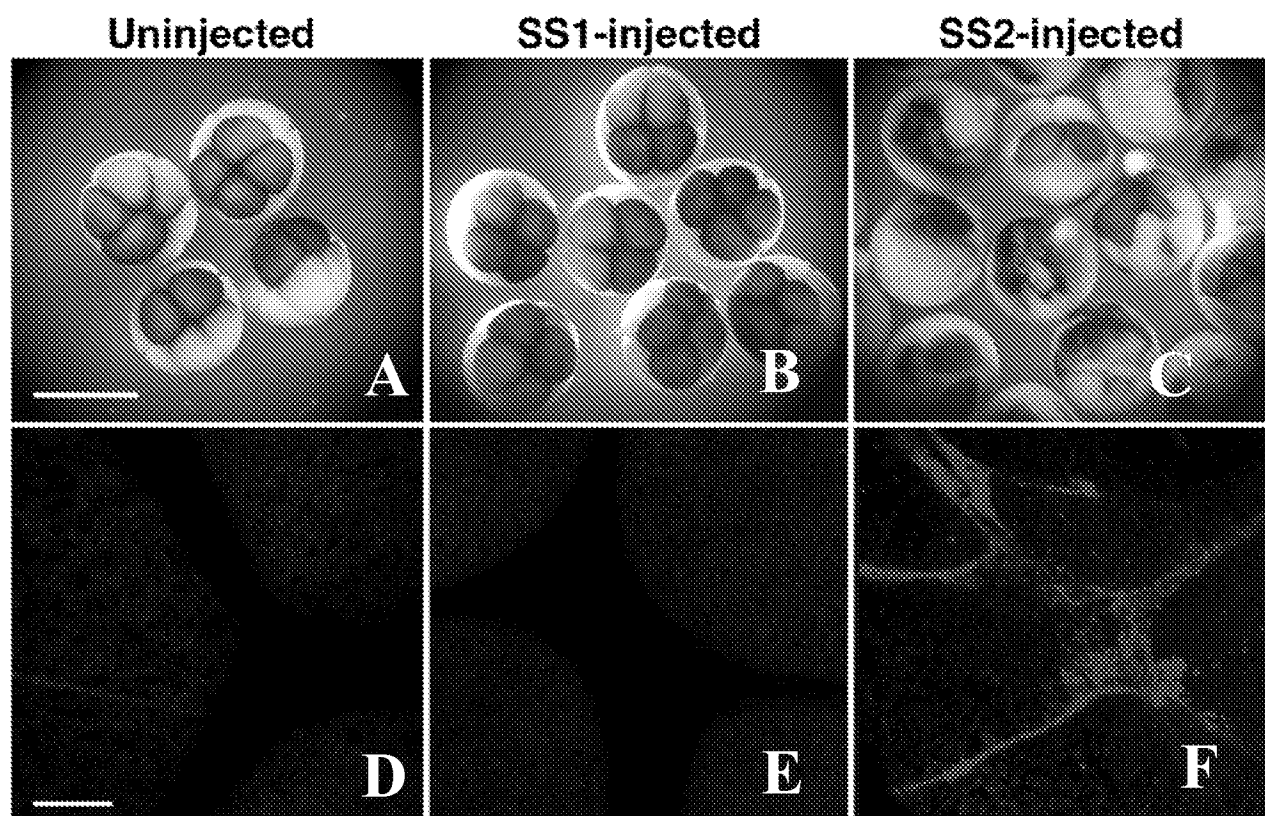
A



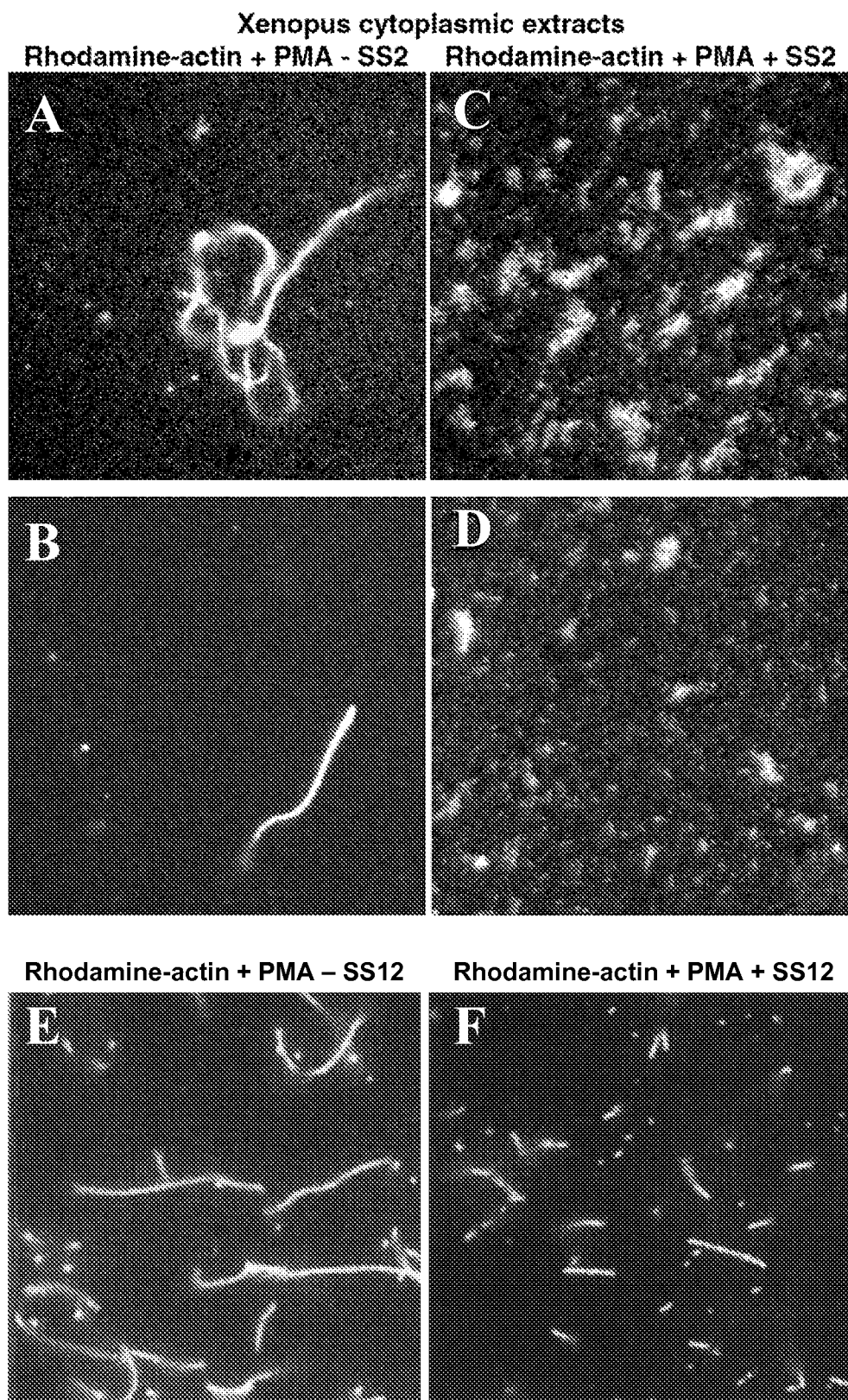
B



**Fig. 3**



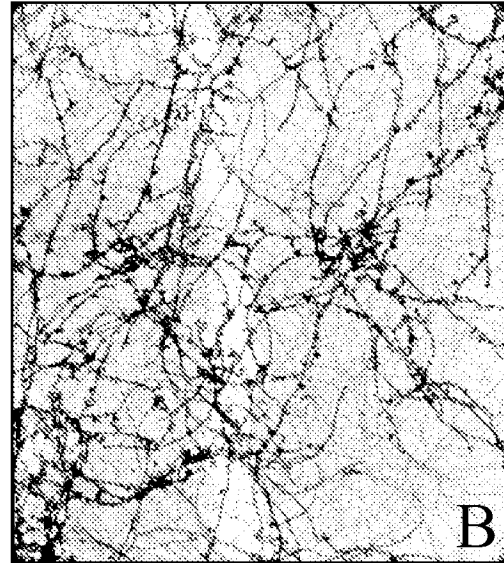
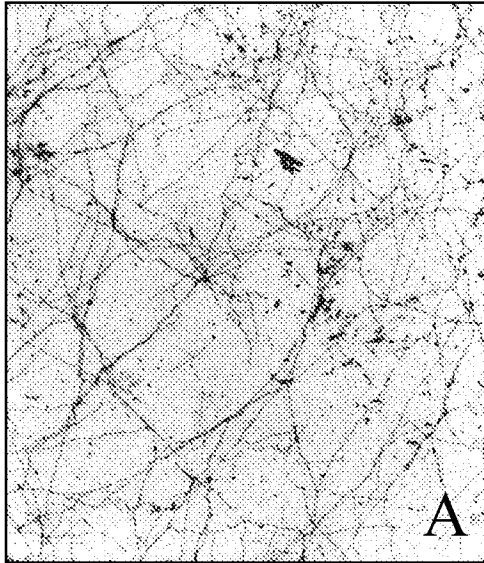
**Fig. 4**



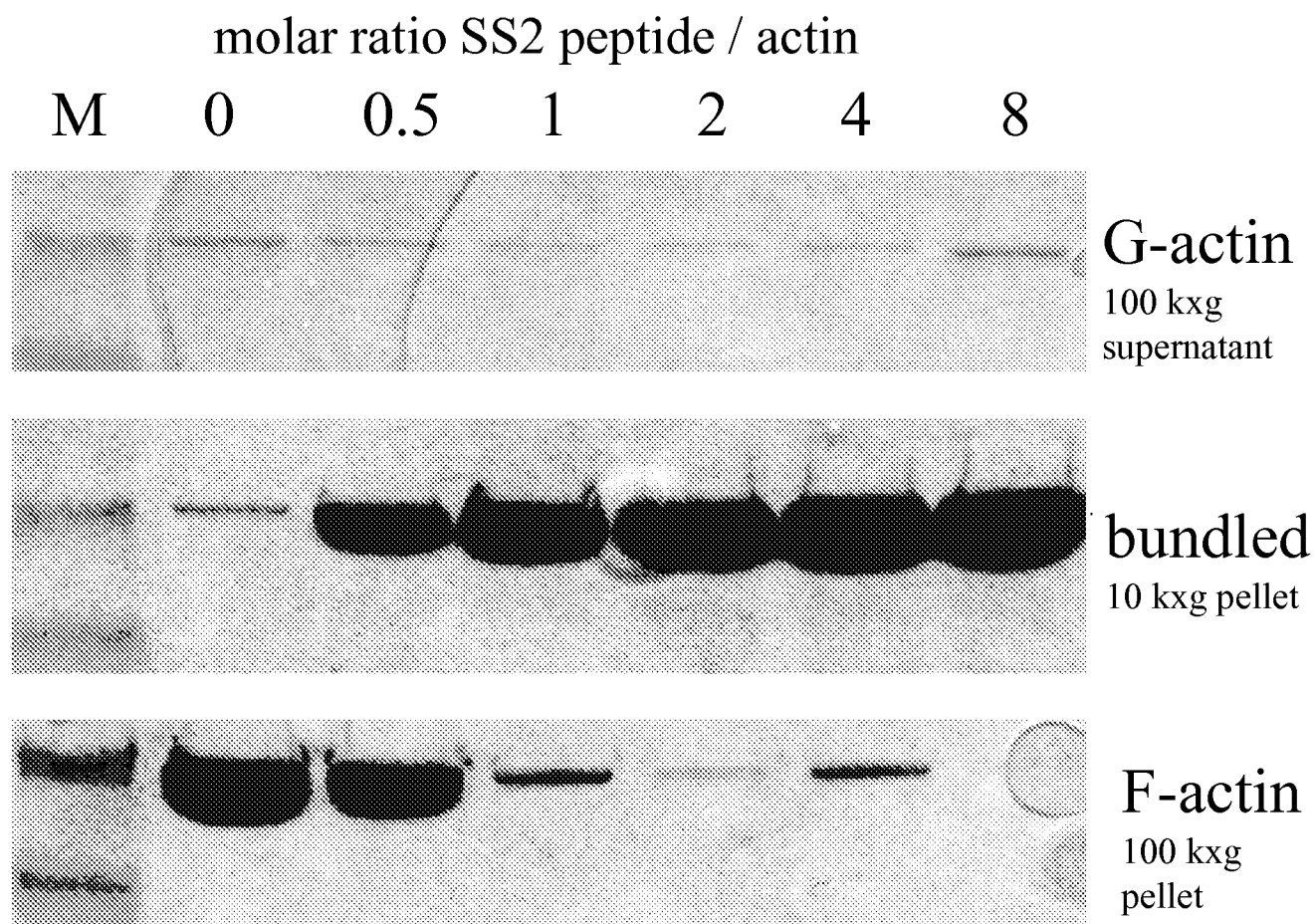
**Fig. 5**

control

SS12

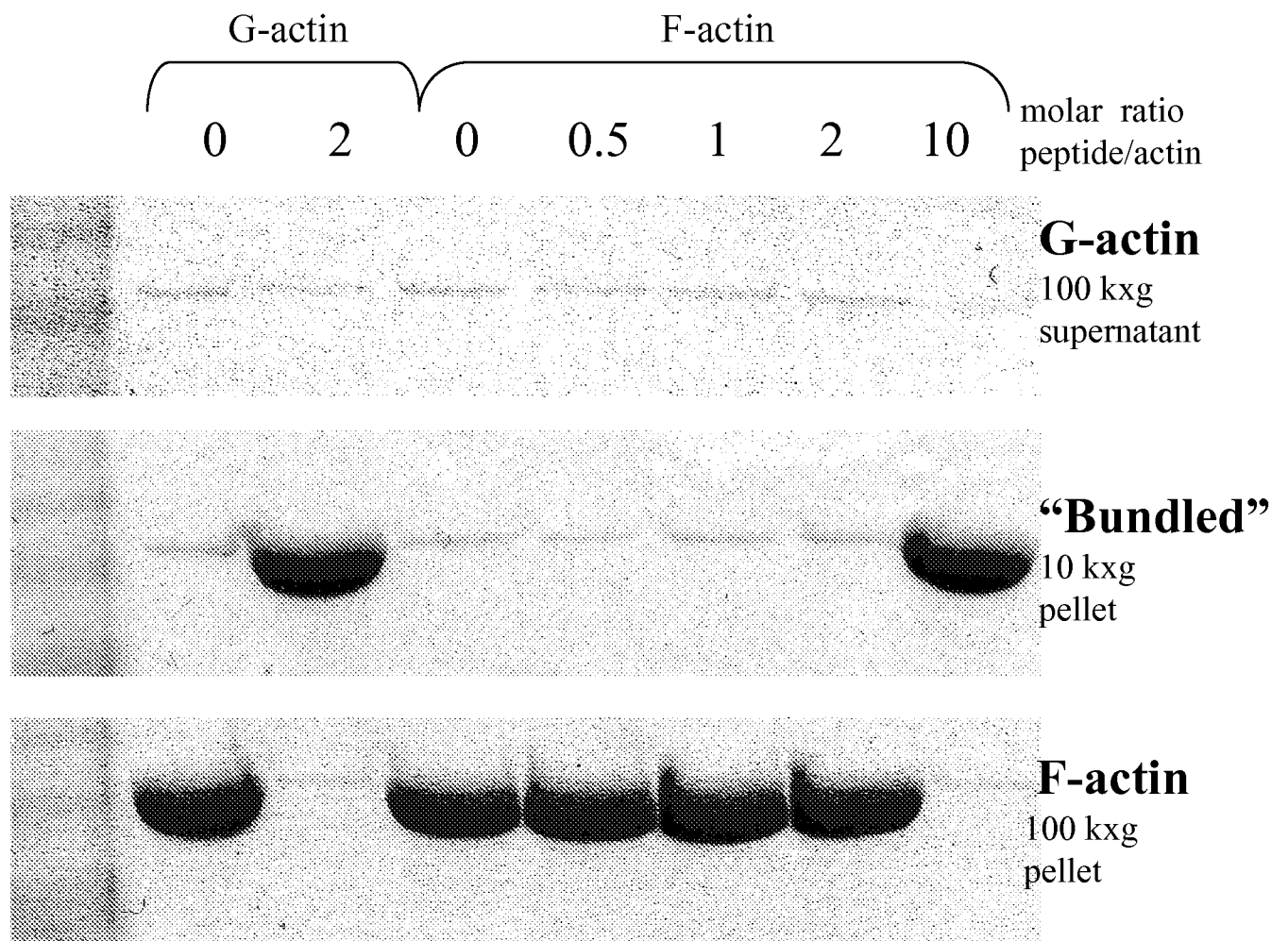


**Fig. 6A**



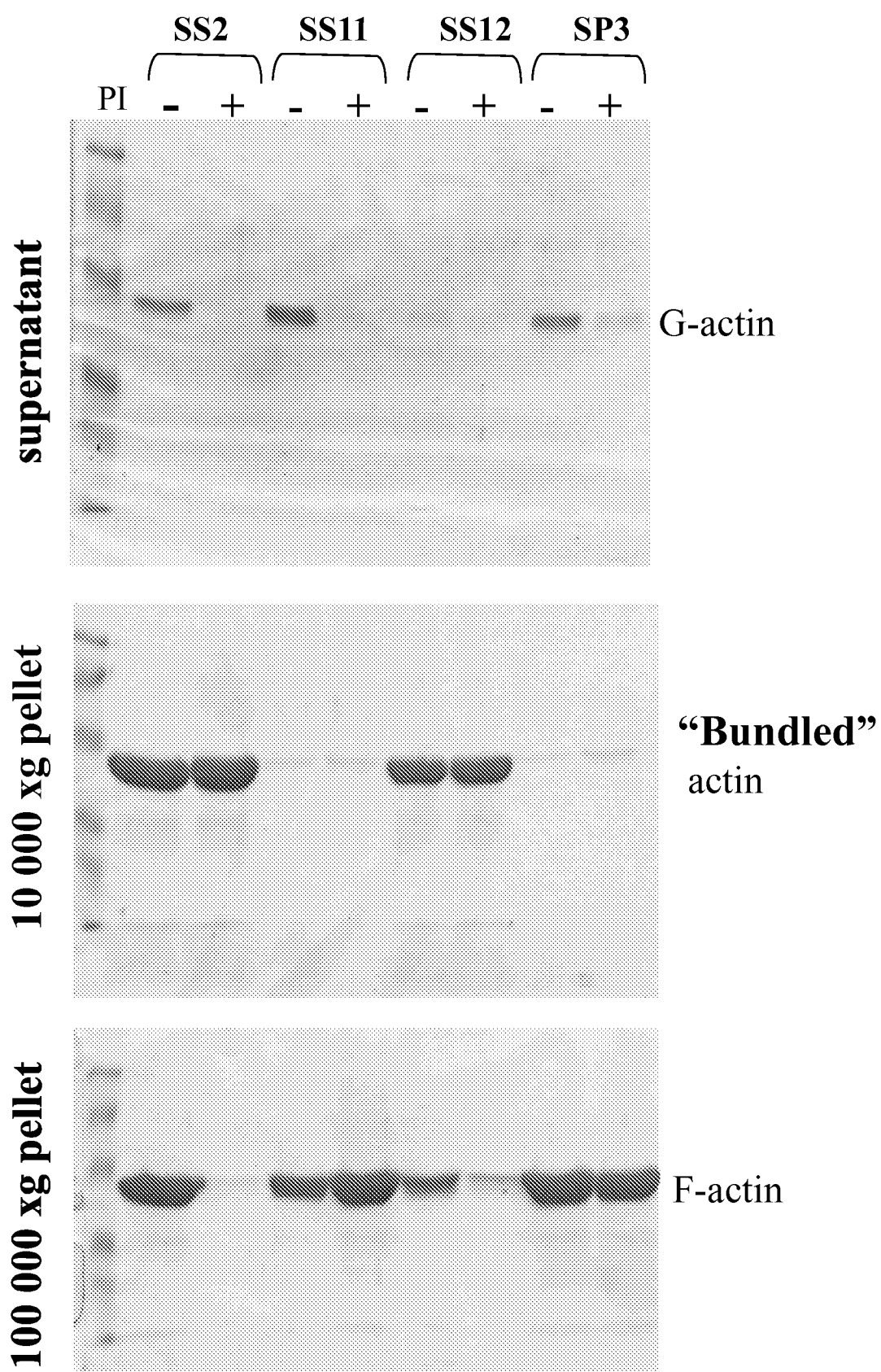
**Fig. 6B**

Effect of SS2 on polymerized  
F-actin in vitro

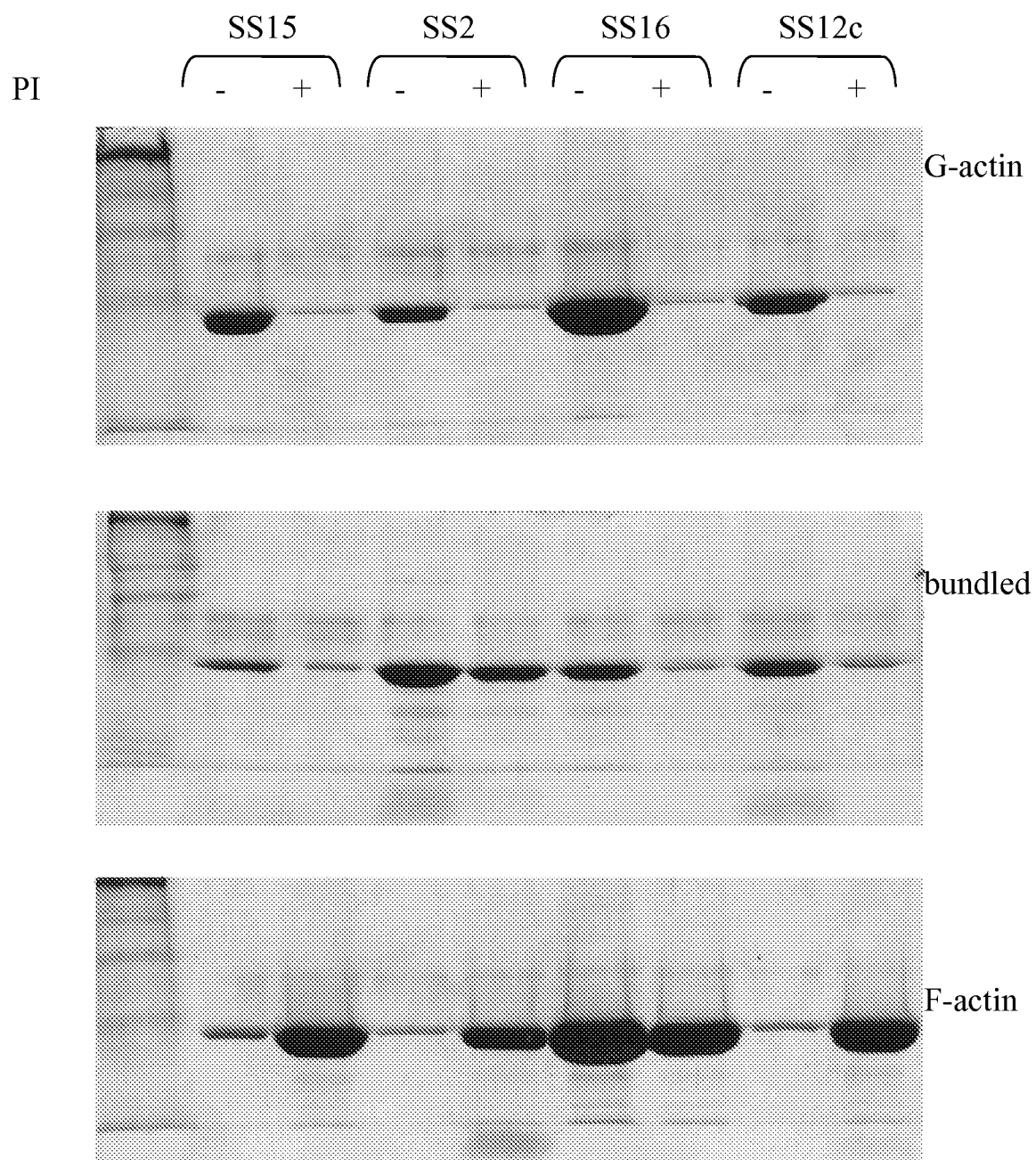




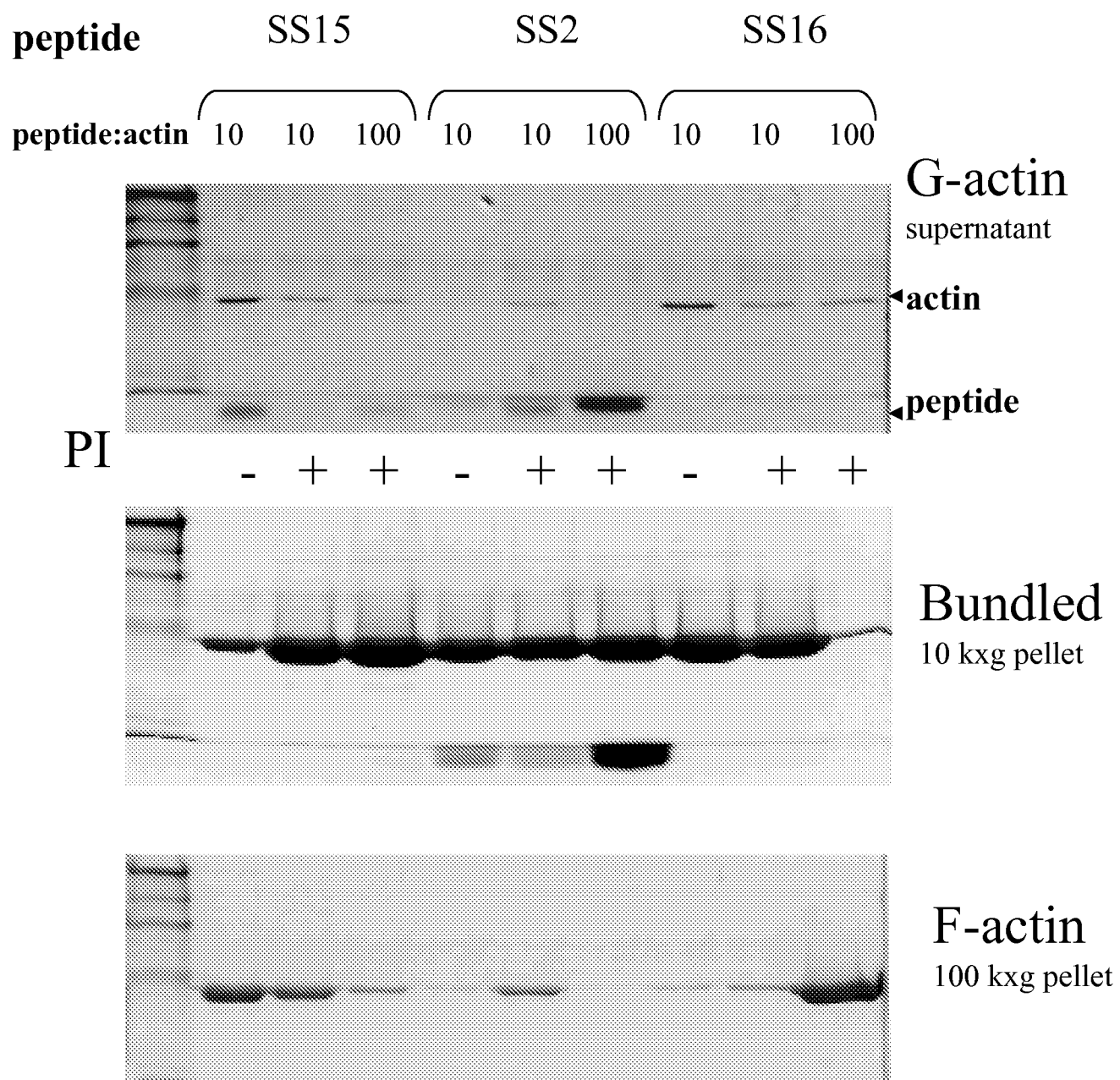
**Fig. 6C**



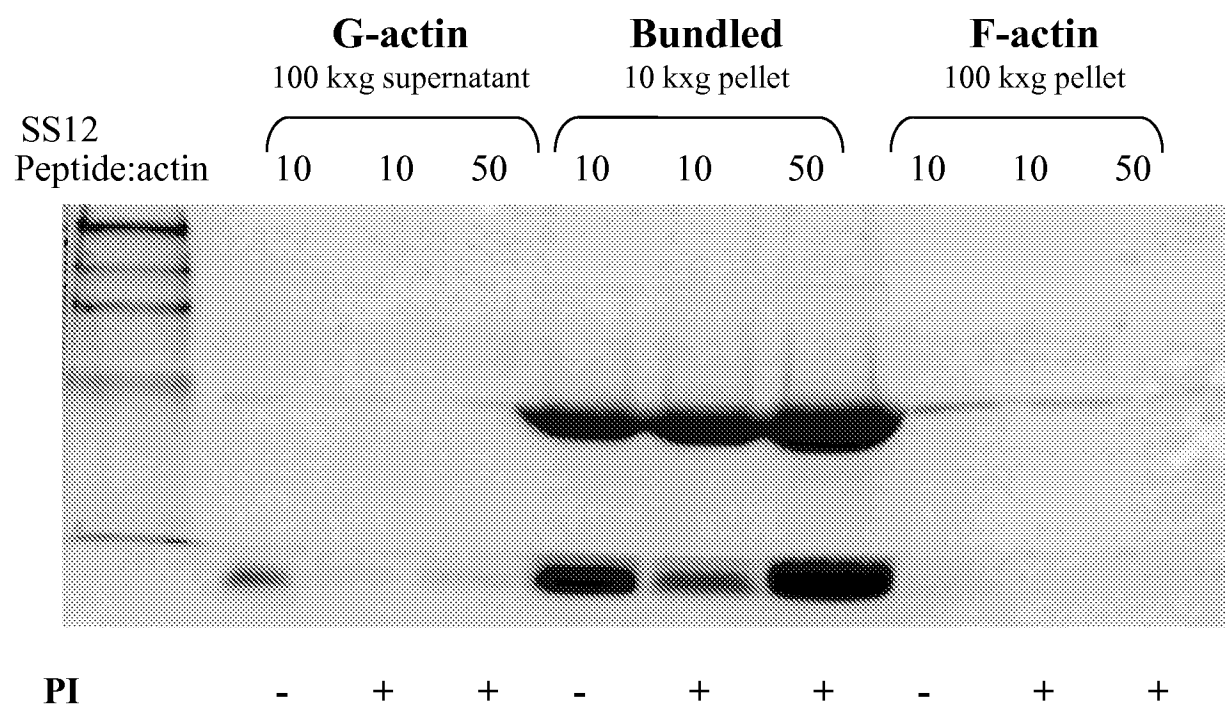
**Fig. 6D**



**Fig. 6E**



**Fig. 6F**



**Fig. 7**

SS2 bundling activity is not affected  
by phalloidin

